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# Beyond Ethnography: Engagement and Reciprocity as Foundations for Design Research Out Here

**Margot Brereton, Paul Roe, Ronald Schroeter**

Electrical Engineering and Computer Science,  
Queensland University of Technology  
2 George St, Brisbane, QLD 4000, Australia  
[m.brereton, p.roe, r.schroeter]@qut.edu.au

**Anita Lee Hong**

Oodgeroo Unit,  
Queensland University of Technology  
2 George St, Brisbane, QLD 4000, Australia  
anita.leehong@qut.edu.au

## ABSTRACT

This paper explores an emerging paradigm for HCI design research based primarily upon engagement, reciprocity and doing. Much HCI research begins with an investigatory and analytic ethnographic approach before translating to design. Design may come much later in the process and may never benefit the community that is researched. However in many settings it is difficult for researchers to access the privileged ethnographer position of observer and investigator. Moreover rapid ethnographic research often does not seem the best or most appropriate course of action.

We draw upon a project working with a remote Australian Aboriginal community to illustrate an alternative approach found in Indigenous research, where the notion of reciprocity is first and foremost. We argue that this can lead to sustainable designs, valid research and profound innovation.

## Author Keywords

ICT4D; Postcolonial HCI; Participatory Action Research

## ACM Classification Keywords

H.5. Information interfaces and presentation (e.g., HCI):  
H.5.3 Group and Organization Interfaces

## BEYOND ETHNOGRAPHY

We acknowledge the Australian Aboriginal peoples and in particular the Anindilyakwa people of Groote Eylandt, who inspire and educate us in their tradition of reciprocity.

Design in remote and economically poor settings has become of increasing interest to researchers in Computer Human Interaction. Traditionally in these settings the method of choice has been ethnography, an approach derived from anthropology. Ethnography involves field study to understand a culture, and usually involves living and being accepted into a culture to understand and

articulate it. It may involve observation, note-taking, interviews, photography etc., which are synthesized into an ethnographic analysis. Anthropology aims to understand cultures, but not to change them. Design, as a discipline that aims to intervene to change for the better, has come up with forms of “rapid ethnography” e.g. [13] that are quicker than those traditionally used in anthropology to more quickly come to understandings that can inform design.

While the purpose of ethnography is often mistaken by designers as a form of data collection [1], ethnography is a powerful means to “open up the play of possibilities for design”. Indeed the contribution that ethnography can make is to “enable designers to question the assumptions embedded in the conventional problem-solution design framework” [1]. Dourish also identified that ethnography does not necessarily produce “Implications for Design” [10].

Ethnography has been used very effectively in ICT4D projects, particularly when combined with forms of Action Research to create “a more holistic picture” of local environments and to integrate this understanding into ICT project design, ongoing evaluation and monitoring in a continual cycle of research and project development [6, 21].

However as Holcombe [11] identifies, the “ethnographic method can provide the researcher with a false sense of his or her own knowing and expertise and, indeed, with arrogance”. Furthermore, ethnography began as an enterprise funded by and in the service of colonial administrators who were interested in managing others, the so-called native peoples of the colonies, providing both the workforce for and sources of resistance to imperialist enterprises [19]. As a result of the history of ethnographic research, many in Aboriginal communities are wary of being investigated [8]. Rapid forms of ethnography found in design research, run a particular risk of taking without giving back to communities and rushing to quick and possibly ill-conceived design approaches.

Indigenous people world-wide have often been researched with little thought given to culturally appropriate methods of engagement, what will happen to the resulting knowledge, who really benefits from the research and how the community will benefit from the engagement. As a result, an ethnographic first approach may be hard to justify

in these communities. Bessarab and Ng'andu [4] call for culturally appropriate engagement processes with Aboriginal groups and individuals as being essential for valid research outcomes such as the ten-step model of engagement proposed by Ranzijn et al [15], that begins with self-reflection on one's own assumptions, understanding the culture and history and establishing cultural supervision through to determining how to obtain feedback on the effectiveness of the engagement.

Winschiers et al [26] identify the tendency in research with other cultures to unwittingly adopt a compensatory approach by considering differences as "deficiencies" to be remedied. They argue for deeper engagement as a way to counter the undue influence of external logics.

Suchman [20] has long argued that we should see design as an "entry into the networks of relations that make technical systems possible". Taylor [22] echoes this calling for imagining computer systems that enrich and are founded upon local emergent practices [12]. But Suchman cautions that sustainable innovations are dependent upon substantial investments of time and resources in infrastructure: the range of social relations that develop only with time, and the human labor needed to put the material arrangements in place and keep them going. She questions the assumption that knowledge in the form of a product can be handed off, arguing instead the need for mutual learning and partial translations [19].

Thus, design informed by rapid ethnography struggles with:

- The difficulty of gaining access to do ethnography itself.
- The implied power relations between the knowledge gatherer and those studied.
- The problem that ethnographic investigation may not serve well to inform design anyway.
- The difficulty of developing useful designs from the resulting ethnographic knowledge, given that much of what makes a design sustainable are the relationships and learnings that take place over time.
- The third person perspective, wherein people are designed for but do not develop the skills or have technologies to design for themselves.
- The nature of the relationship with a local community and their derived design aspirations. It potentially results in 'fishing', with engagement and design a distant second.

We propose that HCI and design research considers an alternative to ethnographically inspired design. The approach is based upon engagement and reciprocity first! Such approaches are already evident in the work of existing Indigenous researchers and those working with Indigenous communities [5,17,24]. Maori Indigenous scholar Tuhiwai Smith notes that "research requires critical sensitivity and reciprocity of spirit by a researcher" [23]. Aboriginal Australians, George and Steffenson designed their

Traditional Knowledge Revival Pathway system on the principal of reciprocity [18]. Aboriginal researcher Peter Radoll notes "time spent fixing people's cars is valuable in nurturing trust in Aboriginal communities jaded by being objects in non-indigenous designers' temporary, research-focused attention. This direct and tangible reciprocity is a customary conduit" [7].

Before proceeding, it is worth framing the approach in relation to Participatory Design (PD) and Co-Design [16]. PD has always been concerned with power relations. It is an ethical and pragmatic stance that commits the designer to engage from the outset with those people affected by a design outcome. PD explicitly attends to designs not being neutral but creating power and agency for particular people, whereas many variants of "user-centered design" seek participation and information from "users" without further consideration of them. PD relies on partnership with participants in which participants bring essential knowledge of their own context and culture while designers bring technical and design facilitation skills creating opportunities for mutual learning and development. However, in the context of a remote and discrete Aboriginal community, participatory methods must be considerably revised to ensure successful engagement. As Winschiers found in Namibia, common PD methods such as workshops and brainstorming were incompatible with the socio-cultural habits of Namibian participants [25].

## THE CONTEXT OF REMOTE ABORIGINAL AUSTRALIA

The Groote Eylandt Archipelago is a unique and diverse environment, and is the homeland of the Warnindilyakwa people (Anindilyakwa) who are its traditional owners. The history of Groote Eylandt has seen dramatic changes and injustices in the social and cultural landscape of the island in a relatively short time since the arrival of missionaries, and a mine [9]. The cumulative effects of long-term disengagement between governments and the communities on Groote Eylandt has led to poor socio-economic outcomes [3,9]. However, the Warnindilyakwa endeavor to "combine a traditional lifestyle with the comforts of the 21st century" [2].

The Anindilyakwa Land Council (ALC) is a progressive council that has initiated approaches across the spectrum to reconnect and re-engage the people of Groote. Fundamental to these initiatives is communication and connection, which has led the ALC to seek new ways of using technology to support communication and connection within and outside the island. Our research team is engaged in a collaborative project with the ALC to design "digital noticeboards" to support communication in the local community and externally. The design of digital noticeboards so that they are useful and sustainable is a considerable challenge and necessitates understanding local aspirations, communication practices and indeed what form and kinds of technologies make sense.

## ENGAGEMENT AND RECIPROCITY FIRST

Given the difficulty of undertaking ethnographic research or traditional PD, our approach prioritizes engagement, reciprocity and sustainability. Reciprocity is core to Aboriginal culture [14] and the idea of mutual and cooperative exchange. Previously we have emphasized the importance of building relationships across cultures through the Aboriginal cultural practice of “yarning” [4] to facilitate in-depth discussions in a relaxed and open manner. This is done without any form of recording device as a mark of respect and may take place in different settings, e.g. walking or driving; often the relevance of particular discussions only becomes apparent after the fact. Questions may be posed, but are not answered until much later, after community deliberation, not during a workshop.

We have also emphasized time spent together in practical activities. We were first engaged in work on Groote to address the environmental threat of cane toad invasion, a pest species in Australia. This led to the deployment of environmental sensors in collaboration with the local Indigenous Ranger groups. Such practical projects involve time spent together engaged in activities on country. This provides time for talking, noticing each other’s different ways, and helping each other out. The digital noticeboard project was first conceived in this context: on country, yarning and with local designs, and importantly was initiated by the community rather than the researchers.

We have undertaken dialogue with Elders to seek suggestions and advice about the noticeboard and to propose ideas. Dialogue and activities have also taken place with the Linguistics Centre staff, the Indigenous Land and Sea Rangers, the School principals and other groups on the Island. We have always started by talking with people and helping them first and doing so with many different groups. This engagement has helped define us within the community and resulted in reciprocation.

Many of the activities undertaken have involved learning about devices, fixing and configuring computers and iPads. It is amazing the insights you gain into technology use and failure from fixing and configuring computers for others! All sorts of technology and design issues become apparent through helping with the seemingly most mundane of issues, like creating a user account. The ALC were keen to reduce their high travel costs, so we helped install and configure Skype on their computers, thereby reducing their travel costs and benefitting the research project with greater engagement through video conferencing. In addition to visiting the community, we host members of the community in our city and university: reciprocity again.

Initially where to start was a vexed issue: a radically different culture, a remote island (expensive and time consuming to visit) and the evident past failures of other researchers was off-putting: everything could go wrong. Yet the answer was simple: start with existing indigenous

designs, engage with people and help people with existing technology (reciprocity). Remote communities are understandably wary of visitors offering solutions. At worst a large Aboriginal industry preys on unsuspecting communities. At best external consultants must be flown in to provide expensive advice. But reciprocity, in word, deed and spirit, builds mutual trust, engagement and benefit.



**Figure 1: Kids at the local festival exploring the noticeboard**

It became clear through meetings and time together that a first noticeboard design should build on an existing community poster representing the Indigenous Protected Area around the island and the Ayakwa newsletter. This became an important aspect of our design process. We presented digital Noticeboard prototypes to Elders to seek their permission, before trialing them at the local Festival. This quickly revealed that ‘publicly’ available community content was inaccessible to the Elders due to lack of computers, internet access and technical literacy. So given the elders love of watching DVD’s of their people, we produced a DVD for them comprising all the community content and noticeboard media. Continual engagement with Elders is vital in a community like the Warnindilyakwa. Our project is still at an early stage but next steps are to engage the community in studying their technology use, and developing school based traineeships for local youth to learn about IT and to participate in noticeboard design.

## DISCUSSION

To Aboriginal people in remote Australia the development and kudos of a new paper may not matter, (though in some communities authorship beyond acknowledgement may be an important part of reciprocity). What is important is that engagement is mutually beneficial and discussed. Why conduct HCI projects here at all? Are they sustainable?

First, if engagement involves researchers and locals helping out with technologies and sharing knowledge about language and country, then mutual learning is occurring. The Warnindilyakwa do appropriate existing technologies, such as iPads. But external expertise can support and enhance local design efforts, where kits and appropriation fall short of their aspirations. By working together, building upon locally used and available technologies, designs can fit within cultural practices and locals can maintain and extend them.

Second, local designs and innovations form the interesting exemplars from which new theories arise. Theories are not born in armchairs. Local designs can be read and understood for their contextual details to assess how they arose and how they might transfer and mutate to a different context; just as the local example of Facebook from a Harvard college dorm formed a new design that seeded new theories of social media. This grounded approach can potentially yield new apps, theories and design strategies, which benefit those on the outside as well as locals. There is great potential to learn from the Warnindilyakwa about design in a highly collective and reciprocity driven culture, where everyone knows and is related to each other. Facebook was derived from an American College Culture and employs a highly transactional and individualistic notion of sharing. The world might have been and can be otherwise by learning from other places.

We conclude that the process of engagement, learning and reciprocity is primary for valid research, and that this approach may usefully apply to design in any local context and culture, not only remote and Aboriginal communities.

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